DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028405
Date Inspected: 15-Sep-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name:	Cris Concha and Scott Kurtom			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 13W-W2.3-@4440 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Richard Garcia continuing to perform CJP groove welding repair from location Y=1300mm to Y=2800mm. The welder was observed manually welding in the 4G (overhead) position utilizing dual shielded Flux Cored Arc Welding (FCAW-G) with 1.6mm diameter electrode implementing Caltrans approved welding procedure ABF-WPS-D15-3110-4. The whole repair length has been excavated and being welded per Caltrans approved Request for Weld Repair (RWR) #201209-022 thru #201209-033. The repair excavation was preheated to more than 225 degree Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket put in place on top of the deck prior/during excavation. The welder pumped up the preheat to more than 325°F during welding. ABF QC Cris Concha was noted monitoring the welder with measured working current of 240 amperes and 23.3 volts. During the shift, repair welding at location mentioned above was completed and the welder has moved to another location Y=0mm to Y=1300mm of the same field splice butt joint. The welder held the same preheat and held it for three (3) hours after welding as required. The welder was noted excavating using carbon air arc gouging the UT detected defects from Y=0mm to Y=1300mm. The whole repair length area being excavated was preheated using the same Miller Proheat 35 prior/during excavation.

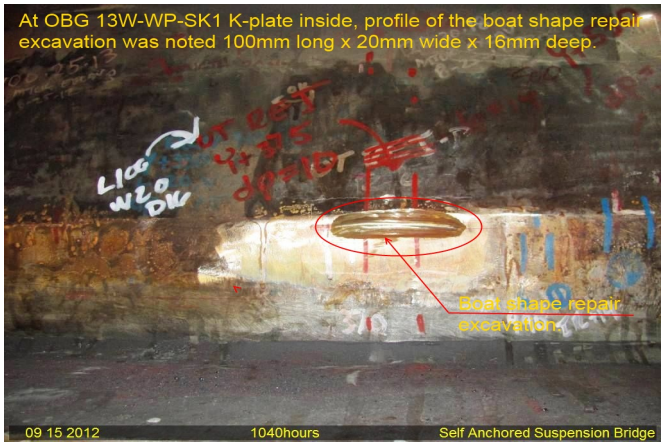
At OBG 13W-WK-SK1 K-plate inside, QA randomly observed ABF/JV qualified welder James Zhen continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) due to Ultrasonic

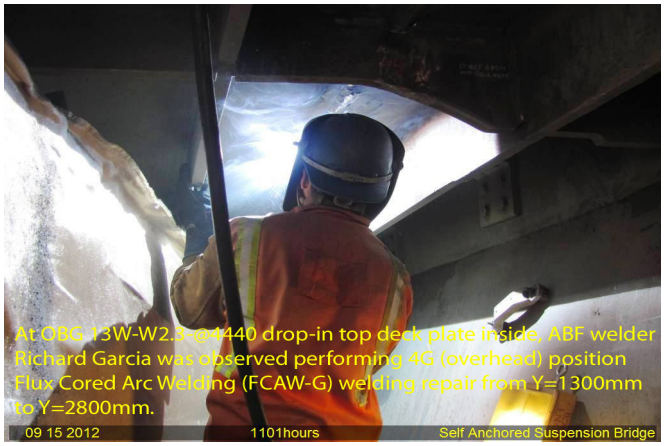
Testing (UT) detected defect on welded butt joint. The welder was given approval to excavate two (2) repairs per Caltrans approved Request for Weld Repair (RWR) #201209-083 and #201209-084. The welder preheated the repair area and its vicinity to >225°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. After its completion, ABF QC performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test.

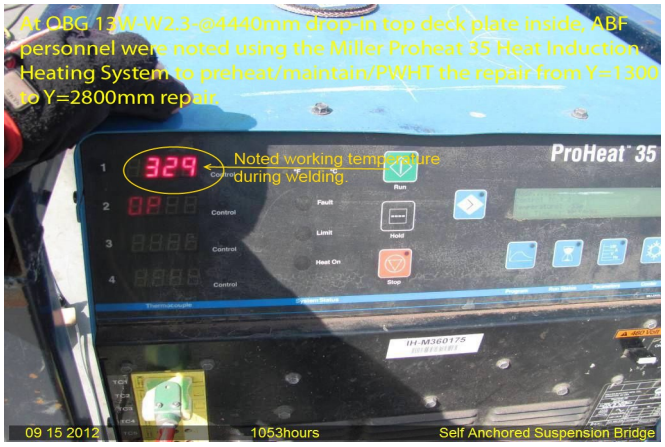
The welder was noted using propylene gas torch to preheat the repair area and its vicinity to 325°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder James Zhen was observed manually welding in 2G (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 3. 2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. Welder James Zhen was noted welding repair at Y=370mm having boat shape excavation profile of 100mm long x 20mm wide x 16mm deep and Y=1550mm having boat shape excavation profile of 110mm long x 30mm wide x 22mm deep. During welding, ABF QC Scott Kurtom was noted monitoring the welders' welding parameter with measured working current of 130 amperes on the 3.2mm diameter E7018H4R electrode. After the welding completion, the welder performed the Post Weld Heat Treatment (PWHT) of 450°F using propylene gas torch and held it for one hour as required. Welder James Zhen has completed from inside the repairs listed below;

Y-location Length Width Depth RWR# Remarks

1. 370mm 100mm 20mm 16mm 201209-084 R3 - Completed.
2. 1510mm 110mm 30mm 22mm 201209-083 R2 - Completed.







WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer